

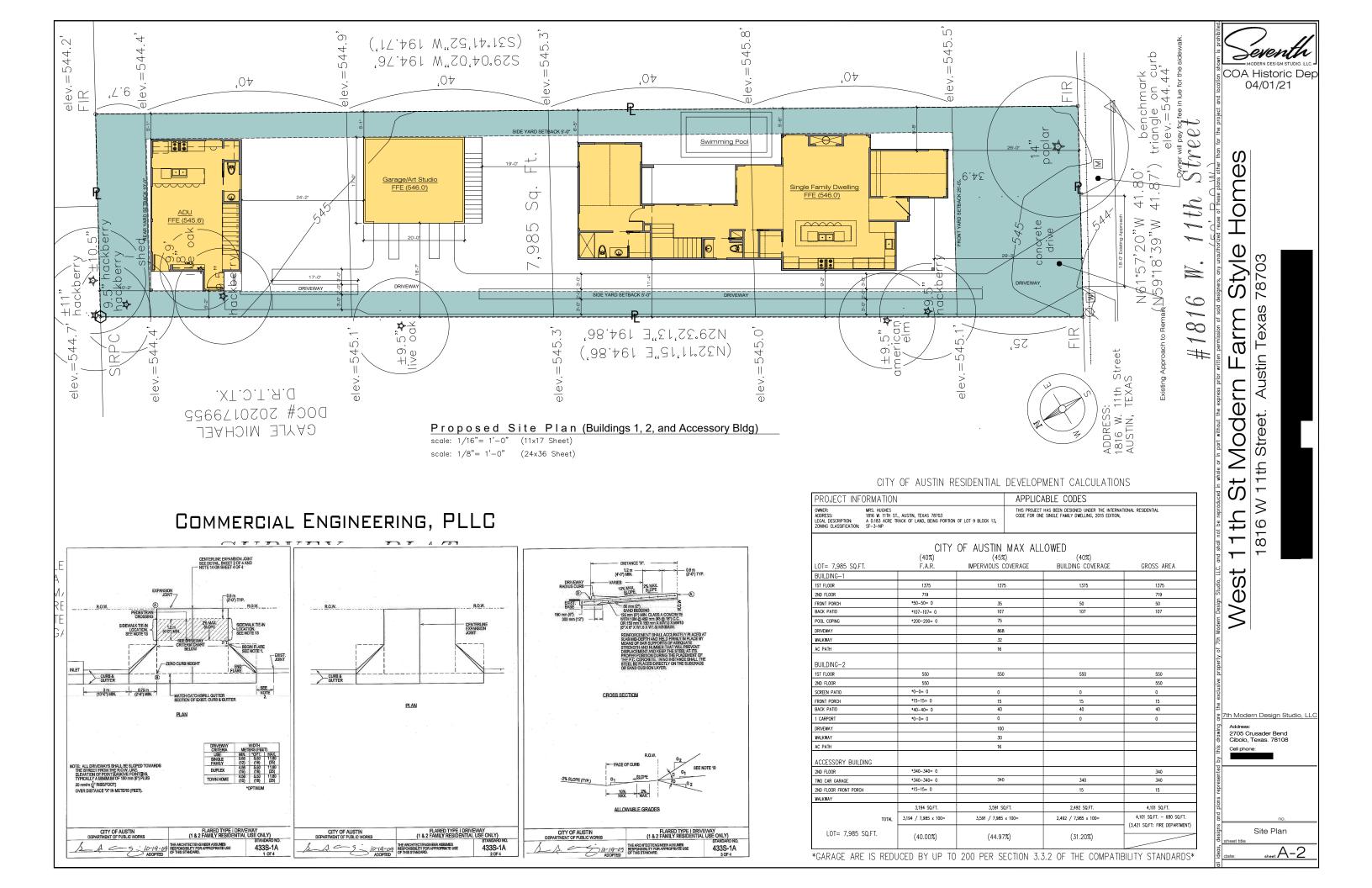
CASA Hughey @ Austin Texas



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Residential Technical Review Handout

This handout serves as a guide for code requirements that are commonly overlooked. Please note, this document does not replace code requirements contained in the 2015 International Residential Code, or Local Amendments.

EGRESS REQUIREMENTS

Emergency escape and rescue required
Basements, habitable attics, and every sleeping room shall have at least one operable emergency
escape and rescue opening with a window sill height of not more than 44 inches above finished floor
(AFF). Reference R310.1 and R310.2.2.

imum opening area

All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 sq. ft. Reference R310.2.1 Exception: Grade floor or below grade openings (sill s44" above or below finished ground level) shall have a minimum net clear opening of 5 sq. ft.

Minimum opening height
The minimum net clear opening height shall be not less than 24 inches. Reference R310.2.1

Minimum opening width
The minimum net clear opening width shall be not less than 20 inches. Reference R310.2.1

The required exit door shall be a single-hinged door not less than 32" clear in width and 78" inches clear in height (Typically must be a 3"0" wide x 6"8" high door to meet requirements). Reference R311.2

Retrofit Windows
Requirements for Retrofit Windows, reference local amendment AJ102.4.3 Emergency Escape and

Floors and landings at exterior doors There shall be a landing or floor on each side of each exterior door with a minimum width of the door served. These landings at the required egress door will not be more than 1 $\frac{1}{2}$ inches lower than the top of the threshold. Exterior landings may not be more than 7 $\frac{1}{2}$ below the top of the threshold provided the door does not swing over the landing. Reference R311.3.1

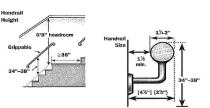






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Porches, balconies, ramps or raised floor surfaces located more than 30 inches above floor or grade below at any point within 36" horizontally to the edge shall have guards not less than 36 inches in height with a maximum 4 inch opening. Reference 312.1



STAIRWAYS

Shall be not less than 36 inches in clear width above handrail height and below headroom height Handrails shall not project more than 4.5 inches on either side and minimum clear width shall not be less than 31.5 inches where handrail is provided on one side and 27 inches where handrails are ovided on both sides. Reference R311.7.1

Minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches. Reference R311.7.2

Vertical Rise
A flight of stairs shall not have a vertical rise larger than 12'-3" (147 inches) between floor levels or landings. Reference R311.7.3

Riser height

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MINIMUM ROOM AREAS/CEILING HEIGHT

Minimum area

Habitable rooms shall have a floor area of not less than 70 sq. ft. Reference R304.1 Exception: Kitchens

Minimum dimension:

Habitable rooms shall not be less than 7 feet in any horizontal dimension. Reference R304.2

Height effect on room area

Portions of a room with a sloping ceiling measuring <5' or furred ceiling measuring <7' above finished floor (AFF) shall not be considered as contributing to the minimum required habitable area for that room. Reference R304.3

Habitable space, hallways, and portions of basements containing these spaces shall have a height of not less than 7 feet AFF. Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of 6'-8" Reference R305 1

Exception: Items 1-3 listed on page 57 of 2015 IRC & R305.1.1 Basements

SMOKE ALARMS REQUIREMENTS

ListingsSmoke alarms shall be listed in accordance with UL 217. *Reference* R314.1.1

Smoke alarms shall be installed in the following locations: Each sleeping room, outside each sleeping area in the immediate vicinity of the bedrooms, on each additional story of the dwelling, and not less than 3 feet from a door to a bathroom with tub or shower except when this requirement would prevent the installation of a smoke alarm in a required location. Note: When more than one smoke alarm is required to be installed, the devices shall be hard-wired and interconnected, with battery back-up. Interconnection not required when listed wireless alarms are installed and they all sound upon activation of one. *Reference* R314.3 and R314.4

Alterations, repairs and additions
When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.

Exceptions: Exterior work such as roofing or siding, replacement or addition of windows and doors, addition of a porch or deck, and mechanical and plumbing work are exempted from providing smoke alarms as required for new construction. Interconnection and hard wiring of existing areas is not required unless there is existing access through attic, basement or crawl space, or access is possible as a result of work being done. Reference R314.2.2, R314.4, and R314.6

CARBON MONOXIDE ALARMS REQUIREMENTS

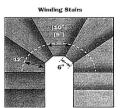
Listings
Carbon monoxide alarms shall be listed in accordance with UL 2034. Reference R315.1.1

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Landings
There shall be a floor or landing at the top and bottom of each stainway. The width of each landing shall not be less than the width of the stairway served and shall have a minimum dimension of 36 inches in the direction of travel.

on: A floor or landing is not required at the top of an interior flight of stairs, including the stairs in an enclosed garage, provided that a door does not swing over the stair. Reference 311.7.



EXTERIOR WALLS

Exterior wall location References IRC Table R302.1(1) and R302.1 Local Amendments Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with table below. These provisions shall not apply to walls, projections, openings or penetrations in walls that are perpendicular to the line used to determine fire separation distance.

Max. 1¼"→

distance.

Exceptions: Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line. 2. Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm), 3. Foundation vents installed in compliance with this code are

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	(Fire-resistance rated)	1 hour-tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	< 5 feet
	(Not fire-resistance rated)	0 hours	≥ 5 feet
Projections	Not allowed	N/A	< 2 feet
	(Fire-resistance rated)	1 hour on the underside a, b	≥ 2 feet to < 5 feet
	(Not fire-resistance rated)	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	< 3 feet
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet

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Where Required

For new construction, carbon monoxide alarms shall be installed in dwelling units within which fuel-For new construction, carbon monoxide alarms shall be installed in dwelling units within which tuer-firred appliances are installed and in dwelling units that have attached garages with a door that connects the garage with the residence. Carbon monoxide alarms shall be hard wired with battery backup, except for CO alarms in buildings without commercial power which can be battery operated. Reference R315.2 and R315.5

For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Required inside bedrooms with fuel burning appliances within the bedroom or attached bathroom. *Reference* R315.3

Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be installed as stated.

Exceptions: Exterior work such as roofing or siding, replacement or addition of windows and doors, addition of a porch or deck, and mechanical and plumbing work are exempted from the above. Carbon monoxide alarms for alterations, repairs and additions can be battery operated. Reference R315.2.2 and R315.5.

SAFETY GLAZING

Hazardous locations requiring safety glazing Reference R308.4 The following locations/uses (but not limited to) require tempered safety gla

- . Panels on doors, except for glazed openings through which a 3" dia. sphere cannot pass, or decorative glazing

 Panels adjacent to door that are less than 60" above walking surface provided that panel is in
- the same plane of the door in a closed position and within 24 inches of either side of the door or where panel is perpendicular and within 24" of the hinge side of an in-swing door.
- Panels in windows where individual panel exceeds 9sf, and bottom of glazing is 18" above floor, and to edge is over 36" above floor, and walking surface is within 36" of glazing measured horizontally and in straight line.
- Guards and railings
- Walls, enclosures or fences containing or facing hot tubs, spas, whirpools, saunas, steam rooms, bathtubs, showers and swimming pools where bottom of edge of glazing is less than 60° from walking surface. Exception: Glazing more than 60° from edge of bathtub, hot tub, spa, whirpool or pool, shower, sauna, or steam room
- Panels less than 36" above a stair landing and within 60" from landing measured horizontally

 Skylights and Sloped Glazing
 Note: The above is a condensed list of the most common safety glazing situations. There are many variables and exceptions not listed above which can be found on pages 55-58 of 2012 IRC

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Roof eave fire-resistance shall be permitted to be reduced to 0 hours on the underside of eave if fireblocking is provided Robit leave liter-resistant or shall be permitted to be reduced to o hours of the unbeside or leave in inecoding is provident from the wall be plate to underside of nor sheathing. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of eave provided gable vent openings are not installed.

VISITABILITY

Visitability applies to new dwellings units subject to the IRC with habitable space in the first floor.

Detailed plans must be prepared by a Texas-Registered Architect or Certified Building Designer nolding a National Council of Building Designers Certification seal. Drawings and notes mus

- . Exterior route originating from garage, driveway, public street or public sidewalk to visitable
- e-step visitable entrance 32" clear (36" door) with beveled threshold 1/2" or less and landing.
- 32" clear accessible route from entrance through living/dining/kitchen to visitable bathroom. Water closet/bathroom located on the first floor shall have a net clear opening of at least 30. water tolservation rocated of the into state into a state and earlier deal opening of a least 30 inches (32" door) and 2x6 blocking @ 34" height from finished floor for grab bars. Door swings shall not impede the 30" x 30" clear floor space within the visitable bathroom.
- . Light switches & environmental controls no higher than 48" and outlets no lower than 15"

Waiver of Exterior Visitable Route

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- A waiver for exterior route can be requested with permit application for
- L. Lots with 10% or greater slope prior to development; or 2. Properties for which compliance cannot be achieved without the use of switchbacks

*S.M.A.R.T. Housing waivers must be approved by Neighborhood Housing and Community http://www.austintexas.gov/sites/default/files/files/Housing/Application Center/SMART Housing/smar

Reference R320 local amendment http://www.austintexas.gov/edims/document.cfm?id=205386

Note: Refer to Building Criteria Manual section 4.4.7 Visitability for additional information: https://library.municode.com/tx/austin/codes/building_criteria_manual?nodeld=S4RECO_4.4.0RESU_RE_4.4.7VI

CRITERIA FOR STRUCTURAL PLANS

Suspended Foundations

- Details for anchorage of structure to
- Foundation requirements at braced wall

- Slab layout (beam locations, changes in

- Concrete compressive strength
- Details for anchorage of structure to
- Foundation requirements at braced wall
- panels

- Footing locations/dimensions
- Footing details (materials, reinforcing, etc.)
- Connection details for superstructure to

foundation

- Stud spacing/ wood grade Headers – size/span/material type

Structural design must meet the prescriptive requirements of the 2015 International Residential Code;

Texas-licensed engineer is required for foundations on expansive soil.

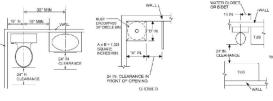
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TOILET, BATH AND SHOWER SPACES

Space Required

Fixtures shall be spaced as per figure below, Reference R307 Figure 307.1, and 2012 UPC 402.5



HANDRAILS/GUARDRAILS

Provided on at least one side of each continuous run of treads or flight with four or more risers. Reference 311.7.8

more than 38 inches. Reference 311.7.8.1

Shall be continuous for the full length of the flight, from directly above the top riser to directly above the lowest riser and shall be returned. Reference R311.7.8.2

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Pier/Footing locations/dimensions

- Pier/footing sizes and depth below grade
- Footing details (materials, reinforcing, etc.) Joist/beam layout (size and spacing)
- panels Connection to existing foundation where

Slab-on-grade Foundations

- slab elevation, slab openings)
- Beam sizes (width and depth)
- Reinforcing details
- . Connection to existing foundation where

- Footings (for decks, pergolas, carports, etc.):
- Footing sizes and depth below grade

Wood Framed Walls:

- Foundation/floor/ceiling connection details
 Anchor requirements to foundation

$\overline{\geq}$ Ċ arm Measured vertically from the sloped plane of stairs or ramp shall not be less than 34 inches and not 3/05/2018 | Page 4 of 9 $\overline{\mathbb{Q}}$ Mod

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Wood Framed Floors: Live loads supported

- Joist sizes Joist layout/spacing
 Intermediate girder size and location
- · Floor sheathing information (type,
- Live load supported Ceiling joist size/lavout/spacing
- Rafter size/lavout/spacing

Wood Framed Roofs:

- Ridge boards · Roof sheathing information (type
- thickness)
- Rafter ties
- Trusses/I-joists: Truss layout and spacing Support structure framing (headers,

beams, walls, columns)

Braced wall methods used

Truss package due at field inspections

- Wind Bracing Plans:
- Braced wall panel locations · Details for methods used

otherwise a Texas-licensed engineer or architect must provide and seal the structural drawings. A

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7th Modern Design Studio, LLC 2705 Crusader Bend

Note: Foundation and Structural will be engineered by a register licensed engineer and inspected before final inspection is perform.

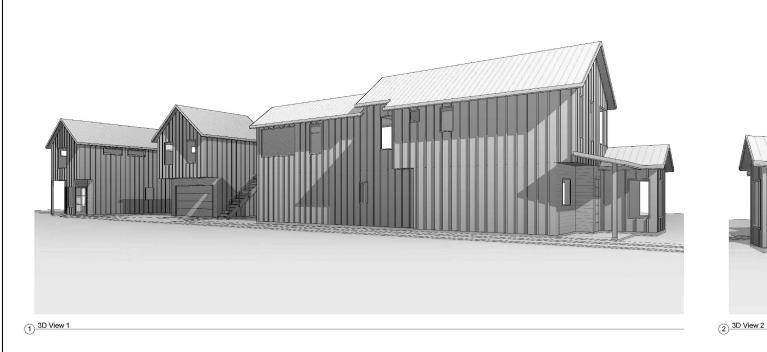
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A-4d

Maximum riser height shall be 7 % inches. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. Reference 311.7.5.

Minimum tread depth shall be 10 inches. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch. Reference 311.7.5. 2

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11th St Modern Farm Style Homes 1816 W 11th Street. Austin Texas 78703 West

Owner Developer: Stephanie Huges

COA Historic Dep 04/01/21

Note: Foundation and Structural will be engineered by a register licensed engineer and inspected before final inspection is perform.

sheet A-5

